

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicants originally submitted Claims 1-21 in the Application. The Applicants have amended Claims 1, 8 and 15. Accordingly, Claims 1-21 are currently pending in the Application. Support for the present amendments can be found, among other places, on page 7, paragraph 19 of the present Application.

Support for page 7, paragraph 19 of the present Application states:

The line voltage stage 110 is coupled to the first, second and third input voltage lines a, b, c and provides first, second and third line voltages **V_{ab}**, **V_{bc}**, **V_{ca}**. These three line voltages **V_{ab}**, **V_{bc}**, **V_{ca}** correspond to voltages measured between the first and second input voltage lines a, b, the second and third input voltage lines b, c and the third and first input voltage lines c, a, respectively. Additionally, the difference voltage stage 115 is coupled to the three line voltages **V_{ab}**, **V_{bc}**, **V_{ca}** and provides first, second and third phase voltages **V_a**, **V_b**, **V_c**. The three phase voltages **V_a**, **V_b**, **V_c** correspond to voltages that exist between a virtual neutral point and the three input voltage lines a, b, c, respectively.

I. Rejection of Claims 1-3, 5-10, 12-17, 19, and 21 under 35 U.S.C. §102

The Examiner has rejected Claims 1-3, 5-10, 12-17, 19, and 21 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,529,013 to Skendzic *et al.* ("Skendzic"). As the Examiner is no doubt aware, anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference; the disclosed elements must either be disclosed expressly or inherently and must be arranged as in the rejected claims.

Skendzic is directed to active crosstalk cancellation in a multi-phase system through use of a capacitive voltage divider for each phase in a multi-phase system. A voltage measurement is obtained for a selected phase of the multi-phase system. A product is generated for a given phase by multiplying each additional phase voltage measurement by a corresponding predetermined constant. The product for each additional phase is subtracted from the voltage measurement of the selected phase. (Abstract).

FIG. 7 of Skendzic is directed to a block diagram of a voltage sensor and crosstalk cancellation system. In FIG. 7, each of phases V_A , V_B and V_C of a three phase AC voltage is measured by an associated capacitor, which are part of a capacitor divider circuit. After buffering, amplifying, and compensating for temperature, crosstalk cancellation occurs in crosstalk cancellation circuits 740_{A-C}. (Column 5, lines 46- column 6, line 33).

As described in Skendzic, crosstalk correction can be expressed as, when simplified:

$$\begin{aligned} V_A^{\text{corrected}} &= V_A^{\text{measured}} - k_1 V_B^{\text{measured}} - k_2 V_C^{\text{measured}} \\ V_B^{\text{corrected}} &= V_B^{\text{measured}} - k_3 V_A^{\text{measured}} - k_4 V_C^{\text{measured}} \\ V_C^{\text{corrected}} &= V_C^{\text{measured}} - k_5 V_A^{\text{measured}} - k_6 V_B^{\text{measured}} \end{aligned} \text{ (Column 7, lines 15-20).}$$

Claim 1, as presently amended, recites a line voltage stage, coupled to at least three input voltage lines, configured to provide at least two corresponding line voltages. A first corresponding line voltage of the at least two corresponding line voltages is a function of a comparison between a first input voltage line and a second input voltage line of the at least three input voltage lines. A second corresponding line voltage of the at least two corresponding line voltage is a function of a comparison between the first input voltage line and a third input voltage line of the at least three

input voltage lines. A difference voltage stage, coupled to the line voltage stage, is configured to provide at least one phase voltage from the at least two corresponding line voltages.

The Examiner has stated that Skendzic discloses (Office Action, page 2):

a three-phase voltage sensor including a phase voltage circuit including: a line voltage stage (Fig. 6A-6C, elements 610-C), coupled to said three input voltage lines, that provides three corresponding line voltages (636A-C), and

a difference voltage stage, coupled to said line voltage stage, that provides three corresponding phase voltages from said three corresponding line voltages (FIG. 7B, elements 750A-C).

Assuming, *arguendo*, that Skendzic discloses the above, Applicants respectfully state that Skendzic does not disclose Claim 1 as currently clarified and amended, as will be discussed below. However, Applicants reserve the right to discuss the above characterization of Skendzic in a later Response or Amendment.

Specifically, Applicants state that Skendzic does not disclose a line voltage stage, coupled to at least three input voltage lines, configured to provide at least two corresponding line voltages, *wherein a first corresponding line voltage of the at least two corresponding line voltages is a function of a comparison between a first input voltage line and a second input voltage line of said at least three input voltage lines, and a second corresponding line voltage of the at least two corresponding line voltage is a function of a comparison between said first input voltage line and a third input voltage line of said at least three input voltage lines.*

In Skendzic, individual phase voltages 636A-C are the result of a comparison between a high voltage conductor, such as V_C 601C, and a corresponding individual phase current of the high voltage conductor, such as I_C 666C, or neutral current, such as I_N 690. (See, generally, column 4, line 59- column 5, line 9). However, nowhere does Skendzic disclose that a first corresponding line voltage of the at least two corresponding line voltages is a function of a comparison between a *first input voltage line* and a *second input voltage line* of said at least three input voltage lines. Instead, Skendzic compares a high voltage conductor with its own current, or the neutral current. (See, generally, column 4, line 59- column 5, line 9).

The Applicants further state that Skendzic does not disclose a difference voltage stage, coupled to said line voltage stage, configured to provide *at least one phase voltage from said at least two corresponding line voltages*. Additionally, Skendzic does not disclose or suggest a difference voltage stage, coupled to the line voltage stage, configured to provide at least one phase voltage , *wherein each at least one phase voltage is derived from said at least two corresponding line voltages*, wherein the difference voltage stage comprises at least one differential amplifier. This differs from Skendzic where the input into the differential output driver 750A-C is a function of a *single* output, that of one of the three crosstalk cancellation circuits 745A-745C. (See, generally, column 6, lines 19-21 and column 8, lines 12-21). In Skendzic, only *one* output of a crosstalk cancellation circuit 745A-C is used to drive the differential output driver 750A-C.

Therefore, Skendzic does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 2-3 and 6 are dependent upon Claim 1, Skendzic also cannot be an anticipating reference for Claims 2-3 and 6. Accordingly, the Applicants

respectfully request the Examiner to withdraw the 35 USC §102(b) rejection with respect to these Claims.

Furthermore, Skendzic does not disclose each and every element of independent Claims 8 and 15 for reasons analogous to Skendzic not disclosing each and every element of independent Claim 1. Therefore, Skendzic is not an anticipating reference for these claims. Because Claims 9-10 and 12-14 depend upon Claim 8, and Claims 16-17, 19, and 21 depend upon Claim 15, Skendzic can not be an anticipating reference for these claims as well. Accordingly, the Applicants respectfully request the Examiner to withdraw the 35 USC §102(b) rejection with respect to these Claims and allow issuance thereof.

II. Rejection of Claims 4, 11, 18 and 20 under 35 U.S.C. §103

The Examiner has rejected Claims 4, 11, 18, and 20 under 35 U.S.C. §103(a) as being unpatentable over Skendzic in view of U.S. Patent No. 4,366,521 to Jessee.

Jessee is directed to a negative sequence filter that employs one to three operational amplifiers and a single reactive element to generate a negative sequence voltage of a three phase AC power system. Jessee purportedly accomplishes this by generating two line-to-line voltages, then phase shifting one of the line-to-line voltages to bring the two line-to-line voltages into phase, and then summing the resultant signals. (Abstract.)

Jessee has not been cited by the Examiner to cure the deficiencies of Skendzic *vis a vis* independent Claims 1, 8 and 15. Therefore, the Examiner has not presented a *prima facie* case of obviousness for these independent claims with the cited combination of Skendzic in view of Jessee.

Because Claims 4, 11, 18 and 20 are dependent upon variously Claim 1, Claim 8, and Claim 15, Skendzic in view of Jessee also does not provide a *prima facie* case of obviousness for Claims 4, 11, 18 and 20. Accordingly, the Applicants respectfully request the Examiner to withdraw the 35 USC §103(a) rejection with respect to these claims.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 4, 11, 18 and 20 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection and allow issuance thereof.

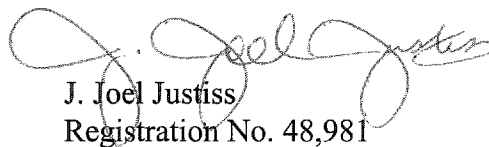
III. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-21.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

HITT GAINES, PC


J. Joel Justiss
Registration No. 48,981

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P.O. Box 832570
Richardson, Texas 75083
(972) 480-8800